

Attorney Docket No.: 01CON355P-CON
Application Serial No.: 10/628,904

List of Claims:

Claims 1-42 (Cancelled)

Claim 43 (Previously Presented): A method of speech encoding comprising:

generating a first synthesized speech signal from a first excitation signal;

weighting said first synthesized speech signal using a first error weighting filter to generate a first weighted speech signal;

generating a second synthesized speech signal from a second excitation signal;

weighting said second synthesized speech signal using a second error weighting filter to generate a second weighted speech signal; and

generating an error signal using said first weighted speech signal and said second weighted speech signal;

wherein said first error weighting filter is different from said second error weighting filter.

Claim 44 (Previously Presented): The method of claim 43, wherein said generating said error signal further comprises:

weighting said speech signal using a third error weighting filter to generate a third weighted speech signal; and

subtracting said first weighted speech signal and said second weighted speech signal from said third weighted speech signal to generate said error signal.

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Claim 45 (Previously Presented): The method of claim 44, wherein said third error weighting filter is independent from and the same as said first error weighting filter.

Claim 46 (Previously Presented): The method of claim 43, wherein said first excitation signal is from a first codebook and said second excitation signal is from a second codebook, said method further comprising:

using said error signal to independently select a third excitation signal from said first codebook and a fourth excitation signal from said second codebook; and

using said error signal to independently select a third gain to apply to said third excitation signal and a fourth gain to apply to said fourth excitation signal.

Claim 47 (Previously Presented): The method of claim 43, wherein said generating said first synthesized speech signal uses a first synthesizer and said generating said second synthesized speech signal uses a second synthesizer, and wherein said first synthesizer is independent from said second synthesizer.

Claim 48 (Previously Presented): The method of claim 47, wherein said first synthesizer is the same as said second synthesizer.

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Claim 49 (Currently Amended): A speech encoder comprising:

a first codebook;

a second codebook;

a speech synthesizer configured to generate a first synthesized speech signal from a first excitation signal of said first codebook and to generate a second synthesized speech signal from a second excitation signal of said second codebook;

a first error weighting filter configured to generate a first weighted speech signal from said first synthesized speech signal;

a second error weighting filter configured to generate a second weighted speech signal from said second synthesized speech signal; and

an error signal generator configured to generate an error signal using said first weighted speech signal and said second weighted speech signal;

wherein said first error weighting filter is different from said second error weighting filter.

Claim 50 (Previously Presented): The speech encoder of claim 49, wherein said speech synthesizer includes a first speech synthesizer for generating said first synthesized speech signal and a second speech synthesizer for generating said second synthesized speech signal.

Claim 51 (Previously Presented): The speech encoder of claim 49 further comprising a third error weighting filter to generate a third weighted speech signal from said speech signal, wherein said error signal generator includes a signal subtractor configured to subtract said first

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weighted speech signal and said second weighted speech signal from said third weighted speech signal to generate said error signal.

Claim 52 (Previously Presented): The speech encoder of claim 51, wherein said third error weighting filter is independent from and the same as said first error weighting filter.

Claim 53 (Previously Presented): The speech encoder of claim 49, wherein said speech encoder uses said error signal to independently select a third excitation signal from said first codebook and a fourth excitation signal from said second codebook, and to independently select a third gain to apply to said third excitation signal and a fourth gain to apply to said fourth excitation signal.

Claim 54 (Previously Presented): A speech encoder comprising:

- means for generating a first synthesized speech signal from a first excitation signal;
- means for weighting said first synthesized speech signal to generate a first weighted speech signal;
- means for generating a second synthesized speech signal from a second excitation signal;
- means for weighting said second synthesized speech signal to generate a second weighted speech signal; and
- means for generating an error signal using said first weighted speech signal and said second weighted speech signal;

wherein said means for weighting said first synthesized speech signal is different from said means for weighting said second synthesized speech signal.

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Claim 55 (Previously Presented): The speech encoder of claim 54 further comprising:
means for weighting said speech signal to generate a third weighted speech signal; and
means for subtracting said first weighted speech signal and said second weighted speech signal from said third weighted speech signal to generate said error signal.

Claim 56 (Previously Presented): The speech encoder of claim 55, wherein means for weighting said speech signal is independent from and the same as said means for weighting said first synthesized speech signal.

Claim 57 (Previously Presented): The speech encoder of claim 54, wherein said first excitation signal is from a first codebook and said second excitation signal is from a second codebook, said speech encoder further comprising means for using said error signal to independently select a third excitation signal from said first codebook and a fourth excitation signal from said second codebook, and means for using said error signal to independently select a third gain to apply to said third excitation signal and a fourth gain to apply to said fourth excitation signal.

Claim 58 (Previously Presented): The speech encoder of claim 54, wherein said means for generating said first synthesized speech signal is independent from said means for generating said second synthesized speech signal.

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Claim 59 (Previously Presented): The speech encoder of claim 58, said means for generating said first synthesized speech signal is the same as said means for generating said second synthesized speech signal.